REMARKS/ARGUMENTS

This is a full and timely response to the final Office Action of August 8, 2002. Entry of the amendment, and reconsideration are courteously requested. By the present amendment, claims 1, 16, 17, and 23 are amended. Claims 4, 5, 19, and 31 are canceled. Thus, claims 1 to 3, 6, 16 to 18, 20 to 30, and 32 to 34 are pending for the Examiner's consideration.

Although the present amendment is made after a final rejection, entry of the amendment is respectfully requested as the amendment is compliant with 37 C.F.R. § 1.116. The four amended independent claims are merely changed by incorporating features from dependent claims, verbatim. Fewer claims are presented as a result of the amendment. Therefore, the present amendment does not raise new issues for the Examiner's consideration, and largely simplifies the issues before the Examiner.

In the previous response, Applicants amended claims 1 and 16 to include the phrase, "said functional film being a functional film other than electrical conductive film." In the Office Action, the Examiner rejected these claims, and claims 2 to 6 as dependent claims, under 35 U.S.C. § 112, first and second paragraphs. In section 2 of the Action, the Examiner asserts that the phrase is an attempt to exclude electrical conductive films from the claims, when there is no positive teaching in the present specification that such electrical conductive films are not part of the invention. In section 4 of the Action, the Examiner asserts that even if the language was positively supported by the present specification, the exclusion is so broad that it arguably excludes some of the types of films that are recited in claim 5.

The present amendment overcomes both rejections by incorporating the list of films from claim 5 into claims 1 and 16. The list to be incorporated does not include "electrical conductive films" because the original intent in making the first amendment was to exclude this feature from the claims. By this amendment, claims 1 and 16 positively recite various film types that are recited in the specification. Further, these independent claims are not in contradiction with any dependent claims. Finally, claims 1 and 16 are clear of the EP 297678 (EP-678) and JP 10258486 (JP-486) references, as evidenced by the Examiner's rejections based on these

references in the initial Action, and the subsequent withdrawal of the those rejections in the final Action.

Regarding the prior art, the Examiner first rejected claims 1 to 6, and 29 to 34 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,935,717 ("Oishi"). The present amendment to claim 1 shows how there are patentable differences between the films prepared by the Oishi methods and those that are "compressed" according to the present claims.

These claims are product claims, and they include many process limitations that recite the manner by which the product is made. Applicants recognize the established principle that process limitations are not automatically given patentable weight in claims that are directed to a product. However, the Examiner appears to be disregarding many of the process limitations that are included in the claims, despite Applicants' previous remarks that explained how the process limitations set the resulting product apart from the prior art. The following discussion presents further explanations regarding the differences that the process steps produce in terms of the final product, so that the Examiner can better understand how the claimed films are set apart from the prior art. The claims explicitly recite process limitations that necessarily ascribe structural limitations to the end product that are not found in the prior art.

Oishi discloses how functional films can be formed on a support. The functional film includes materials similar to those of the present claims, and the materials are of a particle size that is similar to that of the materials of the present invention. However, Oishi is completely devoid of teachings where the functional films are compressed in any manner. Instead, Oishi teaches (col. 6, lines 34 to 38) that the functional film is applied to a PET support by way of a dipping process. While this difference in manufacturing processes is significant, the compression process would not necessarily create a structural difference in the claimed functional film unless the degree of compression is significant. Therefore, claims 1, 16, and 29 now recite that the compression force is at least 44 N/mm^2. The present specification (page 29, lines 1 to 19) teaches that compression at this level provides a functional film that has excellent functionality, is mechanically stronger, and adheres to the support more closely. The present

application (p. 25, lines 3 to 15) also teaches that the particles are "buried" into the resin that serves as either a support or as an intermediate adhesion layer due to the compression step.

In the Action, the Examiner also rejected claims 17 to 20, and 23 under 35 U.S.C. § 102(b) as being anticipated by EP 297678 (EP-678). Claims 17 and 23 recite that the coating layer contains between 0 and 3.7 parts by volume of a binder resin, with respect to 100 parts by volume of the conductive fine particles, and that compression takes place at a temperature below a glass transition temperature of the support. Yet, the Examiner discounts these features as process limitations that do not ascribe structural limitations to the final product. The Examiner's assertion in this respect is erroneous.

As established in the prior response, a major difference between these claims and the EP-678 reference may be explained in the present specification (p. 29, line 20 to p. 31, line 19), where it is taught that compression is carried out at such a temperature that the support is not deformed, and if the support is a resin, the compression is carried out a temperature below the glass transition temperature of the resin. If the support is metal, the temperature should be well below the metal melting temperature. In contrast, EP-678 discloses (col. 2, line 49 to col. 3, line 15; col. 4, lines 25 to 50) that the substrate that serves as a support is heated to a point where the substrate is softened enough to have the conductive particles be embedded into the substrate. In the same passages, EP-678 discloses that the glass transition temperature of a substrate is a useful guide for choosing a molding temperature, and that the temperatures should typically be higher than the glass transition temperature of the substrate. EP-678 clearly teaches that the substrate must be sufficiently soft until it flows. The present application teaches (p. 25, lines 3 to 15) that even though the present process does not involve softening the substrate, the particles are "buried" into the resin that serves as either a support or as an intermediate adhesion layer.

Further, the present amendment adds a particle diameter range to independent claims 17 and 23. The Examiner concedes that the EP-678 reference fails to teach or suggest this particle diameter range in the Action.

The Examiner next rejects claims 17, 21 to 22, and 24 to 28 under 35 U.S.C. § 102(b) as being anticipated by JP 10258486 (JP-486). These claims are patentable over JP-486 without the need for further amendments. Independent claims 17 and 24 recite that no binder resin is included, or that the binder resin is present between 0 and 3.7 parts by volume of a binder resin, with respect to 100 parts by volume of the conductive fine particles. The Examiner erroneously asserts again that these are process limitations that do not ascribe functional differences between the claims and the prior art. However, it is clear that the binder content in JP-486 does not read on the rejected claims.

Further, claim 24 recites that the transparent resin impregnates the conductive film after the compression step. While the Examiner asserts that this is of no consequence in terms of structural differences, it is respectfully pointed out that the present specification (page 40, lines 1 to 25) teaches that by impregnating after compression of the film, voids that would otherwise exist are filled, and the film exhibits reduced light scattering. Such a property is not provided to the films disclosed by JP-486.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

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Respectfully submitted,

By [signature] 47,255

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Version With Markings to Show Changes Made

1. (twice amended) A functional film comprising a compressed layer of functional fine particles obtained by compressing a layer containing the functional fine particles that is formed by application onto a support with a compression force of at least 44 N/mm^2, said functional film being [a functional film other than electrical conductive film] selected from the group consisting of a magnetic film, a ferromagnetic film, a dielectric film, a ferroelectric film, an electrochromic film, an electroluminescent film, an insulating film, a light-absorbing film, a light selecting absorbing film, a reflecting film, a reflection preventing film, a catalyst film and a photocatalyst film.

16. (twice amended) A functional film comprising a compressed coating layer of functional fine particles on a support with a compression force of at least 44 N/mm^2, said functional film being [a functional film other than electrical conductive film] selected from the group consisting of a magnetic film, a ferromagnetic film, a dielectric film, a ferroelectric film, an electrochromic film, an electroluminescent film, an insulating film, a light-absorbing film, a light selecting absorbing film, a reflecting film, a reflection preventing film, a catalyst film and a photocatalyst film.

17. (amended) A conductive film comprising a compressed layer of conductive fine particles formed by application onto a support,

wherein said compressed layer of conductive fine particles is obtained by compressing a layer containing the conductive fine particles and optionally a binder resin in an amount of less than 3.7 parts by volume with respect to 100 parts by volume of said conductive fine particles onto the support with a compression force of at least 44 N/mm^2, at a temperature below a glass transition temperature of said support, wherein said conductive fine particles have a particle diameter from not less than 5 nm to not more than 100 nm.

23. (amended) A conductive film comprising a compressed coating layer of conductive fine particles on a support,

wherein said compressed coating layer of conductive fine particles is obtained by compressing a coating layer containing the conductive fine particles and optionally a binder resin in an amount of less than 3.7 parts by volume with respect to 100 parts by volume of said conductive fine particles onto the support with a compression force of at least 44 N/mm^2, at a temperature below a glass transition temperature of said support, wherein said conductive fine particles have a particle diameter from not less than 5 nm to not more than 100 nm.